

INTERCONNECTED BROADCAST AND SELECT OPTICAL  
NETWORKS WITH SHARED WAVELENGTHS

**ABSTRACT**

- These and other objects of the present invention are achieved in a method of  
5 transmitting optical signal traffic. An all optical network is provided with at least two  
rings that are geographically dispersed. Each ring includes at least one transmitter and at  
least one receiver. The available wavelengths are separated into distinct ring bands. The  
optical signal traffic is shared throughout the entire optical network. Each ring is provided  
with its own distinct ring band of the optical signal traffic. All of the optical signal traffic  
10 is transmittable throughout the optical network. Each receiver is configured to receive  
only wavelengths in a ring band designated for its associated ring.